

REMARKS

Favorable reconsideration of the subject application is respectfully requested in view of the above amendments and the following remarks. Following entry of the above amendments, Claims 37 and 60-71, and new Claims 74-83 are under consideration, with Claims 37, 74, and 78 being in independent format. This Amendment and Reply to the Office Action, mailed September 2, 2009, is being filed with a Petition for Extension of Time of 2 Months, and instructions to deduct the requisite extension of time fee payment from our USPTO Deposit Account. This Amendment and Reply is therefore timely filed.

Claim 37 has been amended to modify the claim recitations slightly to emphasize that the claimed crop protection composition comprises at least two active compounds, *and to specify that the composition is formulated as an aqueous suspension concentrate*. Support for the amendment can be found on page 3 of the application, and in the examples described on pages 8-9 of the specification as originally filed. Claim 65 has been amended to delete the term "carriers". Claim 67 has been amended to remove redundant wording. Claims 68 and 70 have been amended to properly depend from Claim 65.

New Claims 74 to 83 have been added. New independent Claim 74 recites a water-based crop protection composition comprising, *inter alia*, water, and specifying that the total proportion of active compounds in the crop protection composition is from 5.0 to 75.0 % by weight. Support for new independent Claim 74 can be found throughout the application as filed, including on page 3 and in the examples described on pages 8-9 of the specification as originally filed. New dependent Claim 75 corresponds to amended Claim 65. Support for new dependent Claims 76 and 77 can be found on page 4 (last paragraph) of the specification as originally filed. New independent Claim 78 recites a water-based crop protection composition *consisting of* a plurality of components, including water. Support for new independent Claim 78 can be found on page 5 and in the examples described on pages 8-9 of the specification as originally filed. New dependent Claims 79 and 80 correspond to previously canceled Claim 10 and pending Claim 67. New dependent Claim 81 corresponds to new dependent Claim 76. New dependent Claims 82 and 83 have been added to recite the claimed compositions being formulated as aqueous suspension concentrates. Support can be found on page 3 and in the examples described on pages 8-9 of the specification as originally filed.

Applicants note that the Examiner indicated in the Final Office Action mailed February 23, 2007, that applicants have support for employing the terminology “water-based” in the claims. It is urged that support for all the above amendments and newly added claims may be found throughout the specification as originally filed and that none of the amendments and newly added claims constitutes new matter or raises new issues for consideration. Entry of the amendments presented above is respectfully requested.

Claim Rejections – 35 U.S.C. §103(a)

Claims 37 and 60-71 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of *Murphy et al.* (U.S. Patent No. 5,658,851) and *Gilmour* (U.S. Patent No. 4,185,992). This rejection is respectfully traversed, particularly in view of the above amendments and the following remarks.

Murphy et al. teaches certain organosilicone compounds that are considered useful as agricultural adjuvants **with carrier oils**. These adjuvants are intended to be used in combination with oil-based agricultural chemicals to improve their ability to spread (*see* col. 1, lines 8-19 and col. 4, lines 2-6). The adjuvant compositions as taught by *Murphy et al.* include modified organosilicone and an oil carrier as the two main ingredients (*see* col. 1, lines 56-62). The adjuvant compositions described in Examples 2-5 of *Murphy et al.* were obtained by mixing an organosilicone with a suitable amount of carrier oil (e.g. a 1:1 mixture, as described in Example 2). Example 6 of *Murphy et al.* describes “aqueous dispersions of agricultural oil compositions.” It appears that the aqueous dispersions of agricultural oil compositions disclosed in Example 6 do not contain any active components.

The Examiner acknowledges that *Murphy et al.* fail to teach some of applicants’ claimed constituents, proportions and particle sizes, and relies on the teachings of *Gilmour* for these deficiencies. Specifically, the Examiner cites *Gilmour* as teaching the use of ethofumesate and metamitron as herbicides and states that one would have been motivated to make the combination because it would be obvious to try combining compounds having the same utility. Applicants note that both metamitron and ethofumesate are relatively lipophilic (poorly water soluble). Applicants acknowledge that it may have been obvious to include these constituents in oil-based formulations, such as those disclosed by *Murphy et al.*, but the inclusion of these constituents in *water-based* crop protection compositions and crop protection compositions

formulated as aqueous suspension concentrates, as applicants' claims require, would **not** be obvious to one of ordinary skill in the art. In view of the remarks provided below, applicants do not believe that the combination of references, even as applied by the Examiner, results in the compositions specified in the applicants' pending claims.

The Examiner also alleges that it would have been obvious to determine the optimum surface area of the silica gel, and the optimum amount of herbicide and the optimum particle size of the active components and auxiliaries, and one would have been motivated to do so to assure that the composition would spread effectively on the plant when applied thereto. *Murphy et al.*, however, fails to provide any basis for this motivation and fails to indicate that any of the above-mentioned parameters would have an effect on the effective spreading of the composition. Applicants note, in particular, that none of the compositions whose spreading properties were tested in *Murphy et al.* contained an active substance or silica gel – See Examples 4-6. This indicates that it was not assumed by *Murphy et al.* that the amount of herbicide, particle size, or surface area of the silica gel would have any effect on the spreading behavior. *Murphy et al.* notes, merely, that the type of lipophilic group plays a role in the spreading behavior. (See, e.g., Col. 4, line 39.) Applicants submit that there is no rational basis for the motivation alleged in the Office action.

Applicants' amended claims focus on the water-based nature of applicants' crop protection compositions. Amended independent Claim 37 specifically recites a crop protection composition formulated ***as an aqueous suspension concentrate***. Applicants' pending claims are specifically directed to water-based crop protection compositions comprising (claim 74) or consisting of (claim 78), *inter alia*, water in addition to a variety of other agents.

Murphy et al. disclose oil-based compositions and, in particular, the use of modified organosilicone materials as agricultural adjuvants with carrier oils. The compositions taught by *Murphy et al.* are prepared using carrier oils and form *oil dispersions*. Example 6 of *Murphy et al.* describes "*aqueous dispersions of agricultural oil compositions*." This is, at most, a disclosure of aqueous, oil-based dispersions. *Gilmour* discloses the use of ethofumesate and/or metamitron. Applicants submit, however, that even if the combination of *Murphy et al.* and *Gilmour* were appropriate, which applicants do not concede it is, the combination would not result in applicants' claimed compositions.

Considerable attention has been given applicants' recitation of water-based compositions and the water-containing aqueous dispersion disclosed at Example 6 of *Murphy et al.* in the prosecution history of this application. The Examiner has also pointed out that Applicants' specification discloses the possibility of using, in particular embodiments, ethoxylated castor oil.

New Claim 78 specifies a water-based crop protection composition *consisting of* specified components, including water. Applicants submit that compositions recited in new Claim 78, and the claims dependent thereon, are not taught by any combination of *Murphy et al.* and *Gilmour*, and that these claims are in allowable form.

Claim 37, as amended, specifies that the crop protection composition is formulated *as an aqueous suspension concentrate*. Applicants submit that aqueous suspension concentrates are fundamentally different from oil-based dispersions and aqueous dispersions which are, fundamentally, emulsions. Applicants submit that, in the technical field of crop protection compositions, the existence of different "formulation types" is generally acknowledged and is well known by those having ordinary skill in the art. These formulation types are referred to by using two-letter codes, such as "SC" for suspension concentrate. *See, e.g.,* "APPENDIX 2; Preparation (formulation) types and Codes," OECD Monograph Guidance, March 2001. (attached hereto as Exhibit A). This Appendix provides an internationally recognized guide to formulation types and, according to this international coding system, the code "SC" stands for "suspension concentrate", which is the same as a "flowable concentrate" and is defined as "a stable *suspension* of active substance(s) in a fluid intended for dilution with water before use." This Appendix also describes several different types of oil emulsions (oil in water and water in oil), as well as other types of oil-containing formulations. These formulation types differ from one another and are composed of different types of constituents. The constituents forming compositions of these various formulation types are not necessarily interchangeable with one another. Constituents that form suspension concentrates do not necessarily form emulsions, and vice versa. A paper entitled "Pesticides and Formulation Technology," Martin et al., Purdue University Cooperative Extension Service 5/01 (copy attached hereto as Exhibit B), also recognizes and describes the fundamental distinctions between suspension and emulsion formulations. As evidenced by Exhibits A and B, one having ordinary skill in the art would understand that aqueous suspension concentrates, as recited in the pending claims, are

fundamentally *different* from oil-based compositions as taught by *Murphy et al.*, and that *Gilmour* does not make up the deficiencies of the *Murphy et al.* reference.

New Claim 74 specifies a *water-based* crop protection composition comprising a combination of constituents, including water, and recites specific (total) proportions of active compounds. Applicants submit that compositions recited in new Claim 74, and the claims dependent thereon, are not taught by any combination of *Murphy et al.* and *Gilmour*, and that these claims are therefore in allowable form.

It is urged that no combination of *Murphy et al.* and *Gilmour* renders applicants' pending claims obvious to one having ordinary skill in the art, and that the present rejection of the claims under 35 U.S.C. §103(a) may be properly withdrawn.

Conclusion

Early reconsideration and allowance of the pending claims is respectfully requested. Should the Examiner have any further concerns regarding the subject application, he is respectfully requested to telephone the undersigned at 206.382.1191.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Ann W. Speckman', with a long horizontal line extending to the right.

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Date: February 2, 2010
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